Department in the field of long range seasonal prediction of monsoon rainfall. No separate financial investment has been made for this purpose. The computations relating to the model did not require the use of the Super Computer.

(c) The Statistical Power Regression model was developed to improve the Long Range Forecasting of Southwest monsoon rainfall. it aimed at predicting in advance the total rainfall for the country as a whole for the entire Southwest monsoon season extending from June to September and is issued by the end of May every year.

(d) Such forecasts are useful for advance micro-planning of agriculture related activities.

(e) These forecasts have not been discontinued. Finance Ministry has not asked the India Meteorological Department to dispense with these forecasts.

Reprocessing of waste fuel from T.A.P.P.

2064. SHRI G. G. SWELL : Will the PRIME MINISTER be pleased to state :

(a) whether Government propose to reprocess the waste fuel from the Tarapur Atomic Power Plant;

(b) if so, the details thereof; and

(c) whether U.S. Government has pointed out that India cannot reprocess the waste fuel from the Plant under the Agreement ?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHUVNESH CHATURVEDI) : (a) and (b) The Tarapur Atomic Power Station (TAPS) is presently operating on enriched uranium fuel. In the absence of enriched uranium, TAPS could be operated on mixed uranium—plutonium oxide (MOX) fuel for which the technology has been developed indigenously. To obtain plutonium required for this MOX fuel, the Government proposes to reprocess the spent fuel from TAPS.

(c) The Agreement for Co-operation between the Government of the United States of America and the Government of India concerning the civil uses of Atomic Energy of 8th August, 1963, provides for the reprocessing of the spent fuel produced in TAPS in Indian facilities upon a "joint determination" of the parties of the safeguardability of the reprocessing plant. Subsequently, the safeguarding responsibility was transferred to the International Atomic Energy Agency (IAEA) by a trilateral Agreement signed between India, USA and IAEA in 1971. In 1980, India and IAEA concluded Subsidiary Arrangements on the safeguarding midalities for the reprocessing plant. Since the Safeguarding responsibility under the agreement of 1963 was transferred to IAEA with the concurrence of USA and IAEA is satisfied about the safeguardability of the reprocessing plant at Tarapur, we have maintained that the need for a "joint determination" between India and USA has been obviated. However, this position has not been accepted by the U.S. Government.

Increased cost of Kaiga Atomic Power Station and Rajasthan Atomic Power Project

2065. MISS SAROJ KHAPARDE : Will the PRIME MINISTER be pleased to state :

(a) whether the cost of Units III and IV of the Rajasthan Atomic Power Project, under construction at Kota and the costs of the Kaiga Atomic Power Station under construction in Karnataka have gone up sharply from the original sanctioned costs;

(b) if so, the details thereof and the reasons therefor; and

(c) what corrective action Government had taken or propose to take in the matter ?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHUVNESH CHATURVEDI) : (a) and (b) The Project Kaiga Atomic Power Station Units 1 & 2 was sanctioned in June 1987 based on a cost estimate of Rs. 730.72 Crores. The Units 3 & 4 of the Rajasthan Atomic Power Station were sanctioned in November 1986 based on a cost estimate of Rs. 711.57 Crores. The original cost estimates did not include Interest During Construction (IDC) because they were sanctioned prior to the formation of the Nuclear Power Corporation of India Limited (NPCIL) in September 1987. The present anticipated cost of the Kaiga project is Rs. 1590 Crores excluding the IDC now estimated at Rs. 685 Crores. The present anticipated cost of Rajasthan 3 & 4 Units is Rs. 1450 Crores excluding Rs. 657 Crores which is the estimated interest during construction. The major reasons for increase in the costs apart from IDC are, increased escalation, changes in the scope of work due to design improvements and safety requirements, increase in taxes and duties and variation in the exchange rate.

(c) Factors such as increased escalation, changes in the scope of work due to design improvements necessitated by safety requirements, variations in exchange rate, changes in taxes and duties are beyond the control of the management of the NPCIL which is implementing these projects. A reduction in the construction period will contribute substantially in containing the IDC and the overall project cost. Monthly and quarterly monitoring of project activities including delivery of equipment, paralleling of erection and commissioning activities and phasewise commissioning of different systems are the major steps taken to expedite completion of the project. Government is alive to the fact that provision of adequate and timely resources can contribute to expeditious and cost-effective implementation of projects, and makes all efforts towards this end.

Installed Capacity of Atomic Power Plants

2066. SHRI KRISHNA KUMAR BIRLA: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that currently the atomic power plants are operating below their installed capacities for power generation;

(b) if so, the plant-wise power generation against their installed capacities during the last three years;

(c) what has been the rate of return on capital employed in these plants for the period;

(d) whether it is a fact that these power plants would not be able to pay back the investments; and

(e) if not, what steps are taken to revitalise the operations of the atomic power plants?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHUVNESH CHATURVEDI): (a) and (b) The details of original installed capacities, revised capacities, gross generation and capacity utilisation during the three financial years 1990-91, 1991-92 and 1992-93 in respect of Nuclear Power Stations in commercial operation by the Nuclear Power Corporation of India Limited (NPCIL) are given below:

Station	Original Installed Capacity (MWe)	Revised† rated capacity (MWe)	90-91		91-92		92-93	
			Gen. MUs	CF %	Gen. MUs	CF %	Gen. MUs	CF %
TAPS 1 & 2	2×210	2×160 (from 1985)	1904	68	1711	61	1935	69
RAPS 2	220	200 (from 1-4-91)	1310	68	1062	60	925	53
MAPS 1 & 2	2×235	2×220$ (from 1-1-92)	2075	50	2160	53	1978	51
NAPS 1 & 2	2×235	2×220 (from 1-1-92)	286* (Unit 1)	56	532 (unit 1)	26	1680*	50

MWe = Mega Watts Electrical; CF = Capacity Factor; Gen. MUs = Generation in Million Units
APS = Atomic Power Station; T—Tarapur; R—Rajasthan; M—Madras; N—Narora.

Notes

1.† The capacities of the power stations were revised based on technical considerations and the experience of operations.

2.* Dates of commencement of commercial operation: 1-1-1991 for NAPS—1; 1-7-1992 for NAPS—2

3.$ The operating power levels of MAPS 1 & 2 are restricted to 175 MWe per unit by the Atomic Energy Regulatory Board (AERB) since end 1989 consequent on the implementation of interim solution to solve the moderator inlet manifold problem.

4. The CFs are with reference to prevalent rated capacities.